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The Agency Control Section

# ASSESSMENT OF THE AIR EFFORT IN VIETNAM AND LAOS (S)

U. S. ARMY

**ANNEX D**



**STAG**

STRATEGY & TACTICS  
ANALYSIS GROUP

**ARC LIGHT**

## COST SUMMARY AND DAMAGE ASSESSMENT

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W A R N I N G (U)

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FOREWORD

1. (S) Annex D is part of an overall study of an assessment of the air effort in Vietnam and Laos. It is an objective analysis of the cost of ARC LIGHT in terms of sortie costs, munitions costs and cost of aircraft lost.
2. (S) In addition, the annex contains the background of the ARC LIGHT program and an overall summary in Appendix I, methodology in Appendix II, a detailed cost summary by mission in Appendix III, and a damage assessment in Appendix IV.
3. (TS) Overall effectiveness of the ARC LIGHT program cannot be quantitatively expressed. Some direct damage has accrued (see Appendix IV) but its greatest impact must be presumed to be in restrictions on the Viet Cong, of which there is some evidence. Observation of direct bomb damage has been inconclusive as far as measurement of overall quantitative destruction of a portion of the gross Viet Cong materiel and personnel capability to engage in military operations against US/RVN Forces.
4. (S) There has been no attempt made to present a subjective evaluation of the ARC LIGHT program in terms what it has done toward accomplishing the objective of the United States. Such an evaluation, to include conclusions and recommendations, will be presented in the final report on 1 January 1966, and will be presented in context with all the air programs being conducted in Southeast Asia.

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ANNEX D

ARC LIGHT

(Guam-based B-52 Strikes in South Vietnam)

1. (TS) PURPOSE OF THE STRIKES. To conduct saturation attacks against target areas known to include VC-occupied installations/facilities, but for which precise target data to permit pin-point bombing attacks are not available.

2. (TS) EVALUATION OF ARC LIGHT AIR STRIKES

a. This evaluation will be presented in two parts--the first part presented here will be an evaluation of the strikes from the standpoint of political/military disruption to the Viet Cong and corresponding benefits to the US/SVN. The second part will be presented in Appendix IV in the form of a damage assessment of the raids in terms of loss of personnel, materiel, and facilities to the VC/PAVN Forces.

b. Any evaluation of the impact that the ARC LIGHT strikes have had on the Viet Cong must be prefaced by a discussion of the methods employed by the Viet Cong to utilize their environment to their advantage, of the frustrations suffered by the US/SVN Forces in their attempts to confront the enemy on terms favorable to themselves, and, finally, of what could be expected in terms of damage, physical and psychological, from the ARC LIGHT program.

c. The insurgent Viet Cong are an elusive force. They are expert at taking full advantage of concealment in heavily foliated forests and mountain areas, and disperse to the maximum degree to avoid presentation of lucrative target concentrations. While many individual Viet Cong lead double lives in that they are members of the community by day and insurgents by night, the Viet Cong organization needs sanctuaries in which they can lead a normal military life of training, conducting exercises, launching operations against US/SVN forces, and preparing for these operations; and to which they can return for regrouping, caring for their wounded, and readying

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themselves for the next operation. Additionally, they require sanctuaries from which they can logistically support their operations. Their encampments, supply caches, and communications/control points are crude, primitive, and unimpressive by our standards but are as important to them as our highly developed installations are to us. The Viet Cong undoubtedly has felt secure in their sanctuary; capable of being able to melt away to their jungle strongholds or safe areas; unseen and free from both tactical air and ground encounters. Their principal ally has been the environment in which they operate. They have been able to choose the sites and conditions under which they conduct their operations.

d. The US/SVN Forces operating under conditions of the Viet Cong's choosing have been unable to fix the enemy and destroy them. This is largely due to the enemy's ability to choose the site and conditions under which the battle is fought, but also to their ability to return to their sanctuary at the first indication that the odds are against them. While we can assess their strength with some accuracy, we have not been able to determine exactly where that strength may be concentrated. The Viet Cong has been able to move freely in vast areas of South Vietnam because they control the remote areas. They have frequently changed their concentrated strength from one area to another. This is particularly true of the hard core Viet Cong Battalions. The one thing which had remained constant was the inviolability of their major sanctuaries. From these areas, logistics support is rendered to both hard core and irregular forces. In these areas they maintain their medical facilities, their training and rest camps, and their major supply caches.

e. Selected target bombings by US/SVN fighter bombers of the Viet Cong sanctuaries had produced satisfactory results from the military standpoint, had a definite salutary effect on SVN elements and had facilitated follow-up exploiting action. The problem had been that because the sanctuary areas were so large and because of remoteness and heavy jungle canopy, it

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was difficult to identify point targets to strike. Further, it was extremely unprofitable to employ the type aircraft available in SVN against area targets because of their relatively small bomb load and because if they were performing against area targets they could not be used in their primary close air support role. It was proposed in early spring of 1965 to use Guam-based B-52 bombers to conduct area saturation attacks against target areas known to include Viet Cong-occupied installation/facilities, but for which precise target data to permit pinpoint bombing attacks were not available. It was felt that effective air attack of these base areas would cause the Viet Cong to move and, hopefully, expose their forces. They would become more vulnerable and probably lose some confidence. Rest and recuperation periods would be shortened and disrupted and they would be forced to move more frequently and to increase their efforts in construction of protective fortifications, even in remote areas. No less important would be the loss of valuable supplies, installations, and facilities. The target areas were selected because of their characteristics and importance to the Viet Cong. Psychologically, the impact on the Viet Cong would be extensive but what was to be hoped for would be the psychological lift to US/SVN Forces operating in areas adjacent to the sanctuaries being bombed. It was hoped that these sanctuaries could be entered following bombing strikes thus creating further disruption and destruction of Viet Cong supplies, installations, and facilities.

f. The first strike was made on 18 June 1965, and there have followed 74 strikes (up to 15 November), involving a total of 1,153 individual sorties. Some direct damage has accrued: (see Appendix IV): a number of underground and above ground facilities have been destroyed, and stores of food and other material either destroyed or exposed. There is no way of estimating, with any degree of validity, personnel casualties. As in normal ground operations in SVN, a meaningful casualty count necessitates denying the Viet Cong the opportunity to dispose of their dead, a

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situation not easily attained with the environment of current B-52 targets. However, review of post-strike photography covering certain areas struck shows large numbers of new burial mounds close to impact areas. Based on information to date, the only conclusion which could be reached is that there has been no significantly large number of casualties directly attributed to the B-52 missions as a whole, granting that perhaps hundreds have been killed. Direct bomb damage, then, has been disappointingly inconclusive insofar as the measurement of overall effects on Viet Cong capabilities is concerned. Indirect results, those somewhat removed from the actual bomb damage, may be surmised with some degree of confidence as fairly well meeting the objectives of the strikes. Safe areas are no longer as safe as they were before the strikes and the Viet Cong has had to vacate some of these areas; for example, Main Spar resulted in reoccupation of Ba Long Valley in Quang Tri Province by RVN Forces after VC units hurriedly evacuated. They have had to seek more substantial facilities and to tighten security of their forces and movements. They have had to work harder at being elusive. There has been destruction and disruption of communications/control locations; for example, in Drum Fire I and II, on 4 and 6 July, a tactical communication station in Zone D failed to return to the air after the strikes. Viet Cong avoidance of ground follow-up units might indicate confusion and unbalance as compared with their usual reactions to such operations, or that they were no longer in the area or that they abandoned the area prior to the strike. Ground operations have penetrated many areas previously posing considerable risk to success, and in some areas the resulting capture or destruction of food and equipment must have hurt the Viet Cong logistically.

g. The patterns of the raids have remained essentially the same throughout the period 18 June to mid-August. The tempo increased throughout July and August and again in August and September. In late August, the pattern of strikes changed from large strikes on a less frequent basis to a

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to a series of more frequent smaller strikes interspersed with a large strike involving a greater number of aircraft. Beginning in October, execution authority for B-52 strikes in five Free Bomb Zones established during September was vested in the JCS, only those strikes outside the FBZ requires Secretary of Defense approval. Previously, all strikes in or out of the FBZ had to be approved by the Secretary of Defense. The recent employment of B-52 bombers in support of operation at Ia Drang required close coordination with ground combat forces but does not appear to change the basic objectives of the strikes to conduct saturation attacks against selected targets in South Vietnam.

h. Appendix IV contains a more precise assessment of damage resulting from B-52 ARC LIGHT strikes.

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